



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

4988 7590 07/09/2008
ALFRED M. WALKER
225 OLD COUNTRY ROAD
MELVILLE, NY 11747-2712

EXAMINER

CADUJAN, ERICA E

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 07/09/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,988	04/21/2004	Norton Spiel	240314 SPIEL COMBO	6920

TITLE OF INVENTION: COMBINATION PLASTIC SPIRAL FORMING MACHINE AND SEMI-AUTOMATIC PLASTIC SPIRAL BINDING MACHINE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	10/09/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

4988 7590 07/09/2008
ALFRED M. WALKER
225 OLD COUNTRY ROAD
MELVILLE, NY 11747-2712

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/28/98 04/21/2004 Norton Spiel 240314 SPIEL COMBO 6920

TITLE OF INVENTION: COMBINATION PLASTIC SPIRAL FORMING MACHINE AND SEMI-AUTOMATIC PLASTIC SPIRAL BINDING MACHINE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	10/09/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
CADUGAN, ERICAE	3726	029-564600

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,988	04/21/2004	Norton Spiel	240314 SPIEL COMBO	6920
4988	7590	07/09/2008	CON?	EXAMINER
CADUCIAN, ERICA E				
ALFRED M. WALKER 225 OLD COUNTRY ROAD MELVILLE, NY 11747-2712			ART UNIT	PAPER NUMBER

3726

DATE MAILED: 07/09/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 234 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 234 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/828,988

Examiner

Erica E. Cadugan

Applicant(s)

SPIEL, NORTON

Art Unit

3726

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 3/31/2008 and interview of July 1, 2008.
2. ☒ The allowed claim(s) is/are 31-38.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Alfred M. Walker on July 1, 2008.

The application has been amended as follows:

The first sentence of the specification has been amended as follows:

This application is a continuation of application serial number 10/215,656, filed August 10, 2002, now United States Patent number 6,726,426, which is a continuation of application serial number 09/677,489, filed October 2, 2000, now U.S. Pat. No. 6,547,502, which is a continuation-in-part of [my pending] application serial number 09/460,887 filed December 14, 1999, now United States Patent number 6,312,204, which application is a continuation-in-part of my application serial number 09/100,724, filed June 19, 1998, now United States Patent Number 6,000,896 dated December 14, 1999, which application was a continuation-in-part of application serial number 08/843,754 filed April 21, 1997, now United States Patent number 5,890,862 dated April 6, 1999.

Non-elected claims (non-elected without traverse in the response of 8/10/2007) 21-30 have been canceled.

31. (Currently Amended) A method for in-line forming a plastic spiral coil in a [typical] coil forming machine and binding the same into holes of a book to be bound in a [typical] page binding machine comprising the steps of:

heating plastic thread and then forming a plastic spiral-shaped filament in [a] the coil forming machine;

cutting discrete plastic binding coil segments away from said heated spiral shaped filament into discrete lengths required for particular books being bound;

transferring said plastic binding coil segments through ambient air to [a] the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled [further] by said ambient air to a temperature substantially that of room temperature; and

said binding machine inserting each said cooled-to-room-temperature plastic binding coil segment into [a] the book to be bound.

32. (Previously Presented) The method of claim 31 wherein said plastic binding coil segments are advanced toward said binding machine in incremental steps upon a transfer mechanism.

33. (Previously Presented) The method of claim 31 wherein said plastic binding coil segments are transferred at least in part by a linkage cooling conveyor.

34. (Previously Presented) The method of claim 33 wherein said cooling conveyor intermittently advances said plastic binding coil segments toward said binding machine.

35. (Previously Presented) The method of claim 34 wherein a drive pulley communicating with and advancing said cooling conveyor is driven by a gear motor; and, a motor speed controller electrically connected to said gear motor causes said drive pulley to

intermittently rotate thereby intermittently advancing said plastic binding coil segments towards said binding machine.

36. (Currently Amended) The method of claim 31 wherein said binding machine interacts with said [plastic spiral] coil forming machine at a compatible speed to each other, wherein said coil forming machine carries out the steps of taking plastic thread from a spool, preheating said plastic thread in a heating chamber, advancing [and then] by winding said plastic thread on a mandrel, discharging said heated plastic thread in said ambient air as said heated spiral shaped filament, said heated [cut] spiral shaped filament [formed] cut into said plastic binding coil segments of a predetermined size being transferred to [said] a transfer mechanism, said transfer mechanism moving said plastic binding coil segments intermittently, allowing said coil segments to cool on said transfer mechanism while on route to said binding machine.

37. (Currently Amended) The method of claim [36] 35 further comprising detecting an end of said plastic spiral shaped filament with a sensor, said sensor being adjustable to a required spiral length of said plastic binding coil segments; initiating the cutting of said [hot] heated spiral shaped filament by a cutter in response to a signal generated by said sensor; initiating an index cycle of said motor through [a] said controller and a logic gate also in response to a signal generated by said sensor; and stopping said motor when a next vane is detected in a predetermined position by a detector.

38. (Currently Amended) The method of claim 37 wherein said transfer mechanism comprises includes a plurality of compartments for said plastic binding coil segments and said method further comprises the step of advancing movement of said linkage cooling conveyor

incrementally to sequentially and discretely empty said compartments of said cooled-to-room-temperature plastic binding coil segments therefrom.

2. The following is an examiner's statement of reasons for allowance:

Firstly, it is noted that the previous rejections based on 35 USC 112 have been overcome by amendment.

Secondly, with respect to the prior art, the final rejection mailed October 30, 2007 describes both U.S. Pat. No. 3,688,809 to Negro and U.S. Pat. No. 4,249,278 to Pfaffle in detail.

'809 Negro teaches an in-line arrangement for "forming" a spiral-shaped filament 13 (see at least Figures 1 and 5-7) out of a wire comprising a plastic coating or out of a thread of synthetic material (see at least col. 4, lines 32-37) using a generic winding device 11 (see col. 4, lines 37-38). The filament 13 is cut into a discrete coil segment 13' via cutting tool 17 (see Figures 1, 5-7), which is then conveyed or "transferred" to an "in-line" threading station 30, considered the claimed "binding machine", wherein the discrete coil segments 13' are threaded or inserted into holes 32 of a stack of sheets 31 to be bound (see at least Figures 5-7 and col. 5, lines 25-27, for example).

However, Negro does not teach the step of "heating plastic thread and then forming a plastic spiral-shaped filament in the coil forming machine" as set forth in independent claim 31. While it is noted that it is considered to be inherent that the thread/wire heats at least somewhat upon being wound or formed in the winding device 11 due to friction as noted in the final rejection, it is noted that as presently-presented, such inherent heating during the winding does not meet the present claim language which requires the step of "heating...and then forming...". (Such is shown in present Figure 22, noting that the plastic thread 505 enters into heating

chamber 511 and then is formed on mandrel 512 thereafter.) In contrast, in the Negro reference, any such inherent heating would occur **during** forming (rather than before forming as claimed).

Additionally, even though it is considered to be inherent that during the time frame between when the coil 13 exits the winding device 11 into ambient air and when it enters into the "binding machine" 30, the coil 13 and coil segments 13', by virtue of their presence in the ambient air after exiting the winding device 11, will cool at least to some degree, it is noted that Negro is silent as to any temperature information about the coil segments 13', and thus Negro does not teach the step of "transferring said plastic binding coil segments through ambient air to the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature..." as set forth in independent claim 31, and then "said binding machine inserting each said cooled-to-room-temperature plastic binding coil segment into the book to be bound" as set forth in independent claim 31.

For at least the foregoing reasoning, Negro does not anticipate the present invention as set forth in independent claim 31.

Additionally, there is no combinable teaching in the prior art of record that would reasonably **and absent impermissible hindsight** motivate one having ordinary skill in the art to so modify the teachings of Negro.

Regarding U.S. Pat. No. 4,249,278 to Pfaffle, it is noted that Pfaffle teaches an in-line forming and binding method utilizing an automatic plastic spiral winding device wherein the plastic thread 33 is fed from a spool 34 into a heating chamber (46 is the heating element housing, 44 is the heating section, where it is advanced and wound onto a mandrel 24 to form a

plastic spiral shaped filament (see Figure 1 and col. 2, line 38 through col. 3, line 5, for example). The formed filament is passed through a cooling chamber 52 of cooling section 45 while still on the mandrel 24, is then fed into the holes 79 of perforated sheets 77, i.e., is "inserted" into the book to be bound (Figure 1, col. 3, lines 6-25 and 49-61, for example), and once the filament has been inserted into the holes, it is then cut at cutting and bending mechanism 78 into discrete plastic binding coil segments (see at least Figure 1 and col. 3, lines 49-59 and col. 4, lines 3-23, especially col. 4, lines 16-23).

Pfaffle does not teach the step of transferring any cut discrete "plastic binding coil segments through ambient air to the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature", as set forth in independent claim 31. Note that firstly, the formed filament does not get cut into discrete plastic binding coil segments until after the filament has been inserted into the holes 79 of the perforated sheets 77 being bound (Figure 1 and at least col. 4, lines 3-23), and thus Pfaffle does not teach any step of "transferring" the plastic binding coil segments to the binding machine at all.

Additionally, while Pfaffle does teach cooling the filament in the cooling section 45 via a vortex forced air type cooling arrangement (col. 3, lines 6-25), firstly, such a cooling section is not a cooling by "ambient air" as claimed in claim 31, and secondly, Pfaffle is silent as to the temperature to which the filament is cooled, and thus does not provide any teaching of providing any sort of coil (neither the uncut filament, nor the cut segments) to the binding machine that has been "cooled" to "a temperature substantially that of room temperature" as set forth in independent claim 31.

Thus, for at least the foregoing reasoning, Pfaffle does not anticipate the present invention as set forth in independent claim 31.

Additionally, Pfaffle does not overcome the deficiencies of Negro.

Note that Pfaffle does not teach the claimed step of “heating plastic thread and then forming a plastic spiral-shaped filament...”, noting that the plastic thread is heated during the formation of the plastic spiral shaped filament (since the forming mandrel 24 whereat the filament is formed is located in the heating section 44).

Additionally, as discussed at length with respect to the Pfaffle reference, Pfaffle does not teach the claimed step of “transferring said plastic binding coil segments through ambient air to the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature”, and “said binding machine inserting each cooled-to-room temperature plastic binding coil segment into the book to be bound” as set forth in independent claim 31.

Thus, for at least the foregoing reasoning, neither Negro, nor Pfaffle, nor any reasonable combination thereof renders obvious the present invention as set forth in independent claim 31.

Re the Pfaffle reference, also there is no combinable teaching in the prior art of record that would reasonably and absent impermissible hindsight motivate one having ordinary skill in the art to modify the teachings of Pfaffle by rearranging Pfaffle’s process such that the cutting of discrete coil segments occurred prior to binding thereof, nor further such that the cut segments then (after cutting) underwent the claimed “transferring...at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature”, and thus, for at least the foregoing reasoning, Pfaffle does not render obvious the

present invention as set forth in independent claim 31. Note that 1) such a reordering of Pfaffle's process would appear to change the principle of operation of Pfaffle's device, and that 2) there is no teaching, suggestion, or reasonable motivation absent impermissible hindsight to so modify Pfaffle. Further note that if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). See also MPEP Section 2143.01.

Regarding references such as the EMI Plastics Equipment brochure, it is noted that the EMI brochure provides a teaching of an air cooling conveyor wherein "chilled air and ambient air blowers shave cycle times to a minimum by finishing cooling outside the mold", and teaches that "EMI can adapt your under press or pass along belt conveyors to cool thick walled and blow molded parts as they leave production". EMI also teaches "[F]or less critical parts, or when only minimal cooling is required, an ambient air Cooling Unit can be provided".

However, such a teaching of an ambient air cooling conveyor device, nor even such a teaching wherein such a cooling device is used for "cooling outside the mold" or for cooling "thick walled and blow molded parts as they leave production" is not sufficient to overcome the deficiencies of either Negro or Pfaffle outlined in detail above, noting that firstly, neither Negro nor Pfaffle teach the production of "blow molded" coil segments. Secondly, specifically re Negro, there is no teaching or suggestion in Negro that any cooling of the binding coil segments is necessary, so a generic teaching of a cooling conveyor, which is described as being used to cool "thick-walled and blow molded parts as they leave production" is not any teaching that would lead one having ordinary skill in the art to use EMI's cooling conveyor with the Negro

reference. Specifically re Pfaffle, such teachings by EMI would not appear to motivate one having ordinary skill in the art to replace Pfaffle's cooling chamber with EMI's cooling conveyor, it is unclear how such would be configured or arranged if such a replacement did occur noting the structure and arrangement of Pfaffle's device shown in Figure 1, and even if such a replacement did occur, the aforescribed deficiencies of the Pfaffle reference would still not be overcome with respect to when the cutting occurs relative to the transferring and binding, and when the forming occurs relative to the heating. Furthermore, the generic cooling conveyor teachings of the EMI reference are not, in and of themselves, a teaching of transferring any plastic binding coil segments through ambient air to a plastic coil binding machine "at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature", nor are they a teaching that the binding machine inserts each "cooled-to-room temperature plastic binding coil segment" into the book to be bound as set forth in independent claim 31. In other words, such teachings by the EMI reference do not mention whether or not any parts are cooled to a "temperature substantially that of room temperature" (and neither do Pfaffle or Negro), and also do not provide any motivation to provide any plastic binding coil segments that have been "cooled-to-room temperature" to the binding machine to be thus inserted into the book to be bound.

Additionally, re the operator's manual (cited in the IDS of April 21, 2004) of the Renz Automatic Plastic Spiral Winding and Length Cutting Machine from July 1990, it is noted that the Renz manual does not teach any method for the "in-line forming...and binding..." of a plastic spiral coil into a book to be bound, but instead teaches a spiral forming and cutting

operation, i.e., does not teach that the forming and cutting occurs in-line with a binding machine/operation.

Even assuming *arguendo* that any coil segments formed and cut by the Renz device are stored in a container or shipped elsewhere prior to being fed into a binding machine such that a long enough time passes that the coil segments are cooled to "a temperature substantially that of room temperature", it is noted that such is still not a teaching, in an "in-line" forming and binding method, or "transferring said plastic binding coil segments through ambient air to the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature; and said binding machine inserting each said cooled-to-room temperature plastic binding coil segment into the book to be bound" as claimed.

Firstly, such is clearly not an "in-line" forming and binding method.

Secondly, even assuming *arguendo* that it would have been somehow obvious to one having ordinary skill in the art at the time the invention was made to have provided the forming and cutting operation taught by Renz "in line" with a binding operation, it is noted that the mere per se provision of making these operations "in-line" is not a teaching or suggestion of how (in ambient air or not), at what rate, or at what temperature the coil segments are passed between the forming/cutting operation and the binding operation, such that the present invention would still not occur, since the step of "transferring said plastic binding coil segments through ambient air to the plastic coil binding machine at a rate such that said plastic binding coil segments are cooled by said ambient air to a temperature substantially that of room temperature; and said binding machine inserting each said cooled-to-room temperature plastic binding coil segment into the

book to be bound" are not provided by the mere per se provision of these operations "in line" with one another.

Also, there is no combinable teaching in the prior art of record that would reasonably and absent impermissible hindsight motivate one having ordinary skill in the art to so modify the teachings of Renz, and thus, for at least this reasoning, Renz does not render obvious the present invention as set forth in independent claim 31.

All of the afordescribed prior art being considered to form representative examples of the closest prior art of record, for at least the foregoing reasoning, the prior art of record neither anticipates nor renders obvious the present invention as set forth in independent claim 31.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any prior art made of record and not relied upon is considered pertinent to applicant's disclosure. As a side note, in the final rejection mailed 10/30/07, Examiner commented that it did not appear that US Pat No.'s 5,890,862 to Spiel, 4,382,586 to Reese, 3,944,049 to Graybill, or 6,000,897 to DesJarlais were of record in this case. However, this statement was apparently in error, as it appears that each of these references is of record. Examiner's statement is hereby retracted.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E. Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on Monday-Thursday, 5:30 a.m. to 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erica E Cadugan/
Primary Examiner
Art Unit 3726

eec
July 2, 2008